There is urgent need of accurate determinations of the loss of snow by evaporation in the Far West of the United States, and also of discharge measurements in one or more basins in order to gage the run-off from melting snow and the contemporaneous precipitation. There is also need of a record of the inclusive dates between which the soil is frozen, and particularly as to whether or not the soil is frozen at the time the first enduring snow cover of the season covers the soil.

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A MODERN CHINESE METEOROLOGICAL MONTHLY.

In the MONTHLY WEATHER REVIEW for May, 1916, Mr. Co-Ching Chu[1] referred to a monthly magazine for astronomy, seismology, and meteorology, published in China. Very recently he kindly sent the editor a sample copy, viz, the issue for December, 1916, which it seems worth while to notice briefly here.

This new journal, whose first number appeared in July, 1915, bears the title "Journal of Meteorology and Astronomy" and is published at Peking by the Central Observatory of the Department of Education. Its front cover, which is the usual left-hand cover page of European journals, measures 25½ by 18 centimeters and is wholly in Chinese character ornamented with an equatorial orthographic projection of the Atlantic-Afric hemisphere having the meridian of Greenwich as the central meridian. The choice of hemispheres was, perhaps, influenced by the astronomical bent of the journal. Following the 14 pages of advertising in colored inks we find in the December, 1916, issue of volume II, 42 pages of matter on meteorology and astronomy followed by 100 pages (independently paged) of astronomical tables.

All the pages are numbered from left to right and, consistently, the text matter is arranged in lines reading from left to right instead of in vertical columns reading downward from right to left. The first 20 pages of the text are devoted to brief papers each independently paged, on astronomical and meteorological subjects, the issue before us containing an illustrated paper on the observation and measurement of cloud altitudes. All the illustrations here are from French sources only, which reminds us that the chief meteorological editor of the journal, Mr. Pin-Jen Chang, received his European education in France.

Pages 21 to 42, inclusive, begin with graphs of pressure, temperature, relative humidity, and winds at the Central Observatory, Peking, for the month in hand, in this case November, 1916. These are followed by daily values at Peking for the following elements:

Pressure: Mean, maximum, minimum, range (mm).
Temperature: Mean, maximum, minimum, range, for air (°C).
Precipitation (mm).
Clouds: Amount (per cent).
Winds: Direction, force (1–8).
Humidity: Relative; vapor pressure (mm.).
Ground temperatures at depths of 30 cm., 60 cm., 100 cm.; etc. (°C.).
Ground water temperature (°C.).
General notes on the weather and sky (international meteorological symbols).

The next 16 pages contain shorter tables giving daily morning and afternoon observations of: Pressure; temperature; relative humidity; wind, direction and force; state of the sky or weather at the following stations:

Name.	Longitude (E.).	Latitude (N.).	Name.	Longitude (E.).	Latitude (N.).
	° ′	° ′		° ′	° ′
Amoy	118 06	24 28	Changsha	112 46	28 13
Swatow	116 40	23 21	Hankow	114 20	30 32
Ningpo	121 42	29 57	Wenchow	120 37	28 00
Chingkung	119 26	32 10	Pehai	109 04	21 28
Kiuklang	116 06	29 42	Ichang	111 21	30 40
Newchwang	122 36	40 58	Langpo	127 30	51 00
Chefoo	121 25	37 32	Wuchow	110 26	23 32
Shami	112 55	23 10	Chungching	106 35	29 29

[1] "The Chinese Weather Bureau," MONTHLY WEATHER REVIEW, Washington, May, 1916, 44: 289.

It would appear that we here have to welcome a Chinese journal, well supported, that is making a determined effort to introduce the best meteorological methods to the people of China and to give them, as well as Europeans, prompt publication of the observational results from the affiliated Chinese observers. The character of the contributions to the journal may necessarily be less advanced in treatment for a few years, but they will undoubtedly reflect the growth of meteorological knowledge and interest in China, and it is the sincere wish of the United States Weather Bureau that the Peking Journal of Meteorology and Astronomy will long continue to be the worthy representative of China's increasing interest in meteorological subjects.

In closing, it only remains to emphasize the desirability of the Journal publishing résumés of its important contributions in a western language.—C. A., jr.

METEOROLOGICAL OBSERVATIONS ON U. S. LIGHTSHIPS.

By H. E. WILLIAMS, Meteorologist in Charge.

[Dated: Weather Bureau, Washington, D. C., May 1, 1917.]

The maintaining of special meteorological stations on lightships is a new departure in United States Weather Bureau work, the service being recently established.

Several attempts had been made by the Bureau to secure reports from light vessels off the Atlantic coast, notably the one off Cape Hatteras, but without success. On September 18, 1915, the Secretary of Commerce addressed a letter to the Secretary of Agriculture informing him that an appropriation was available for a first-class light vessel on Nantucket Shoals, Mass., and asking if the Weather Bureau would be interested in obtaining observations and reports from this station, and also informing the Secretary that in September, 1912, "arrangements were made at the request of the Navy Department for certain weather observations to be made on this vessel, such observations being broadcast from the vessel by radio three times each day." Subsequent correspondence developed the fact that the observations for the Navy Department consisted of the state of the weather, direction and force of the wind, and character of the sea.

The foregoing offer was accepted by the Weather Bureau, and subsequently permission was obtained to establish stations on three other lightships, making a total of four which were established, as follows:

Diamond Shoals Lightship No. 71, N. C., to date March 10, 1916 (Instructions 87, 1916);

Frying Pan Shoals Lightship No. 94, N. C., to date April 22, 1916 (Instructions 39, 1916);

Nantucket Shoals Lightship No. 85, Mass., to date August 19, 1916 (Instructions 87, 1916);

Heald Bank Lightship No. 81, Tex., to date November 1, 1916 (Instructions 87, 1916).

The equipment consists of 1 marine barometer, 3 exposed thermometers, 2 anemometers, and 1 single-register.

Two observations are taken each day and radiographed to the nearest land station, and thence by telegraph to Washington. The usual elements are observed, except the rainfall is not measured.

The designation of the observers is "Observers lightship," and they receive pay at the rate of 25 cents for each observation.

The establishment of meteorological observatories on United States lightships described above is the latest phase in the utilization of these marine outposts for the benefit of United States sea traffic. As soon as the commercial success of wireless communication was evident the Weather Bureau began to arrange for the distribution of forecasts to outgoing and incoming ships by that method from conveniently located lightships, and the system was in action by July, 1902.[1] European weather services had established meteorological instruments on the lightships in the Baltic, the North Sea, and elsewhere as early as about 1900.

It is to be anticipated that the anemometer observations thus to be secured by a registering and recording instrument will be of the greater interest to the student of atmospheric mechanics and dynamics.—C. A., jr.

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AVALANCHE WIND AT JUNEAU, JANUARY 26, 1917.

By M. B. SUMMERS, Meteorologist and Section Director.

[Dated: Weather Bureau, Juneau, Alaska, Feb. 19, 1917.]

An avalanche wind occurred near Juneau, Alaska, on January 26, 1917, at 9 a. m., as the result of a heavy snowslide into Gold Creek Gulch.

An unusual amount of snow had accumulated on the slope of Mount Juneau, which has an east-west trend and an altitude of about 3,500 feet. The southern slope is quite precipitous and at its foot is a narrow ravine or gulch. Winding along the opposite or southern bank of this ravine at about 50 feet above the floor is a roadway with a heavy plank walk along its outer edge. Just below the plank walk, yet some distance above the bottom of the ravine stood three cabins. These cabins happened to stand just opposite the 150 feet broad section of the north bank where the snowslide occurred. The force of the blast generated by the downrushing snow was sufficient to completely demolish the cabins and their débris was carried 100 feet up the slope in company with the 4 by 4 inch timbers and 12 by 2 inch cross planks of the walk. Another indication of the force of this wind is given by a large piece of concrete cement chimney which was also carried up the slope with as much apparent ease as were the other fragments. It appears that the wind had a lateral as well as a forward component, as was evidenced by the destruction of a cabin 500 feet down the gulch in the direction of Juneau, the edge of the city being only about a quarter of a mile away. The force of the wind was felt throughout the city, and carried with it a blinding whirl of snow that came with a suddenness that was startling and that enveloped the city in a pall of semidarkness for several minutes. Unfortunately the Weather Bureau anemometer had not yet been installed, and the velocity is therefore not known.

It should be borne in mind that the snow did not pile up on the opposite side of the gulch and that it did not at any point touch the buildings that were demolished. The destruction wrought was due entirely to the force of the wind generated by the great velocity of the slide as it neared the bed of the gulch.

Photographs showing the appearance of the slide and the resulting damage are inclosed. These were taken in the afternoon about five hours after the phenomenon occurred and during which interval nearly an inch of snow had fallen, thus rendering the débris less conspicuous than would otherwise have been the case.

Two other slides occurred on the same slope during the same forenoon and within a mile of the one above described. In one of these two men who were working on an electric transmission line lost their lives.

[1] *See* G. W. Smith in this REVIEW, 1914, 42 : 544.
Also footnote to article by Dr. P. Polis in this REVIEW, December, 1908, 36 : 407.